

**To:** Kappelman, David[Kappelman.David@epa.gov]; Nguyen, Lyndsey[Nguyen.Lyndsey@epa.gov]  
**From:** Daly, Eric  
**Sent:** Tue 10/4/2016 2:42:02 PM  
**Subject:** Fwd: US Ecology Waste Acceptance Criteria

Dave. Was the info below what you were requesting? Do we need to discuss prior to 2pm call today?

----- Original Message -----

**Subject:** Re: US Ecology Waste Acceptance Criteria  
**From:** "tim.curtin@usecology.com" / " <tcurtin16@aol.com>  
**To:** Janelle Kite <jkite@gesoncall.com>  
**CC:** kerry.durnen@usecology.com,joel.belloni@usecology.com

Janelle, regarding our WAC at our MI site please see the info below per your e-mail and my request to Kerry, our Dir of Ops at our MI site.

Please feel free to forward on to Eric as some of the WAC info below will be part of our discussion tomorrow at 2 PM EST.

As is often the case, there are always site specifics that drive how one confirms a WAC is being met. Look forward to our discussions tomorrow at 2.

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Tim,

You requested that I discuss our thorium and uranium waste acceptance criteria applicable to the Niagara Falls Boulevard project.

First some background on USEM and TENORM. USEM can accept TENORM. We can accept TENORM that is commingled with RCRA hazardous waste, non-hazardous waste and TSCA waste.

We can accept TENORM liquids, solids and debris. We can accept TENORM into both our RCRA hazardous waste treatment plant Michigan Disposal Waste Treatment Plant (MDWTP) and into our RCRA/TSCA landfill Wayne Disposal, Inc. (WDI). MDWTP is an option if the waste requires treatment such as solidification, stabilization of metals, destruction of organics, neutralization, etc. MDWTP is also an option to manage TENORM when the isotope activities exceed direct landfill limits for certain isotopes.

The key acceptance criteria of interest with respect to thorium and uranium is that the total combined thorium and uranium must be less than 500 mg/kg in each shipment received at the facility. This is true for both WDI and MDWTP.

For each new waste stream we require gamma spectroscopy analyses showing the standard isotopes reported in a gamma spectroscopy report. How many samples are required to properly characterize the waste is a case by case discussion taking into consideration the volume of waste, site history and other generator knowledge and factors that may be relevant.

Separate from waste characterization sampling is a discussion of how the generator intends to demonstrate shipments contain less than 500 mg/kg thorium and uranium. It is my understanding that some of the soil from this project exceeds 500 mg/kg of total thorium and uranium so it will be necessary for the generator to mix different segments of waste to ensure that the <500 mg/kg limit is met in each shipment. This could be accomplished, for example, by creating one or more batches of soil that are thoroughly mixed and then collecting post-mixing verification samples to demonstrate that the <500 mg/kg limit is met. We are open to discussing other options. But whatever approach is decided on is something we need to document in the approval file.

**Kerry Durnen, P.E.**  
Director of Operations

[kerry.durnen@usecology.com](mailto:kerry.durnen@usecology.com)  
p: 734.699.6265 | c: 734.576.0189 | f: 734.699.3499

49350 North I-94 Service Drive Belleville, MI 48111

*Emergency Response: 800.839.3975*

*Customer Service: 800.592.5489*

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-----Original Message-----

From: Janelle Kite <[jkite@gesoncall.com](mailto:jkite@gesoncall.com)>  
To: 'tim.curtin@usecology.com' / <[tcurtin16@aol.com](mailto:tcurtin16@aol.com)>  
Cc: Francisco Rodriguez <[frrodriguez@gesoncall.com](mailto:frrodriguez@gesoncall.com)>  
Sent: Mon, Oct 3, 2016 2:37 pm  
Subject: US Ecology Waste Acceptance Criteria

Tim,

Eric is asking about the WAC for US Ecology regarding this project.

Thx,  
Janelle

Janelle Kite  
Transportation and Disposal Coordinator  
**Guardian Environmental Services Company, Inc.**  
302-518-1917 mobile  
[jkite@gesoncall.com](mailto:jkite@gesoncall.com)  
Visit us at [www.gesoncall.com](http://www.gesoncall.com)